ABSTRACT

An apparatus and method for detecting an over-programming condition in a multistate memory cell. The invention is also directed to identifying the over-programmed cells and providing an alternate location at which to write the data intended for the over-

5   programmed cell. An over-programmed state detection circuit generates an error signal when the data contained in a multistate memory cell is found to be over-programmed relative to its intended programming (threshold voltage level) state. Upon detection of an over-programmed cell, the programming operation of the memory system is modified to discontinue further programming attempts on the cell. The over-programmed state

10   detection circuit is also used to assist in correcting for the over-programming state, permitting the programming error to be compensated for by the memory system.